

RURAL DISTRICT COUNCIL
OF
DARTFORD.

TENTH
Annual Report
FOR
1908,

BY
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RURAL DISTRICT COUNCIL OF DARTFORD.

Tenth Annual Report of the Medical Officer of Health for the year 1908,

*And Special Report upon the working of the existing arrangements in connection
with the duties of the Chief Inspector.*

THE RURAL DISTRICT OF DARTFORD comprises 17 Parishes, viz., (Ash, Fawkham, Hartley, Kingsdown, Longfield, Ridley, Southfleet)—Crayford, Wilmington, Darenth)—(Stone, Swanscombe)—Sutton-at-Hone, Eynsford, Farningham, Horton Kirby, and Lullingstone), which, with the Urban Districts of Dartford, Erith, and Bexley, constitutes the Dartford Union.

Population.—The total population of the Union at the time of the Census in 1901 was 96,051, viz.: Dartford, 18,644; Erith, 25,296; Bexleyheath with East Wickham, 14,579; and the Rural District, 37,532 (now 41,525).

Characteristics of the District.—Like the rest of Kent the Rural District is hilly, with narrow valleys intersecting one another, and mostly running north and south, of which the chief is the Darenth Valley, through which runs the river Darent in its course to the Thames. Flowing in the same direction through the chalk, there is also a considerable underground stream of water, from which the Kent Water Company, now placed under the control of the London Water Board, derives its supply by means of numerous wells and pumping stations, several of which are within the Rural District. Fruit and vegetables are the main agricultural industries. A few years back Swanscombe and Southfleet had numerous Hop Fields, but only a few are now left in Southfleet, all of those in Swanscombe having been ploughed up, as well as many in Southfleet.

Area.—The area of the Rural District is 38,890 acres, and the estimated population is now (1909) 41,525. Its outline forms an irregular square of about ten miles in each direction, and the Thames bounds it towards the north.

Registration Districts.—For Registration purposes it is divided into three districts: the largest, the Farningham District, about 3,000 acres in extent, is entirely rural, and has a population of about 18,000, with 3,000 houses. The smallest, the Parish of Crayford, has 2,455 acres, with a population of about 7,000, and about 1300 houses consisting of the old town of Crayford on the river Cray, and another portion immediately adjoining Erith, the North End or Slades Green, a populous district, which has sprung up in recent years. The third, the Stone and Swanscombe District, about 5,000 acres, has a population of over 12,000, with some 2,200 houses. These two Parishes skirt the river Thames, and are the centre of some of the largest Cement Works in Kent.

Administration.—For many years past the Sanitary work of the District has been carried on by four Inspectors under my charge, who, in addition to their ordinary work, superintend and carry on the cesspool emptying in their respective Districts, and used to attend the meetings of the Council.

At the commencement of last year a change was made, and a Chief Inspector was appointed, who now attends the meetings of the Council instead of the other Inspectors, and furnishes a summary of the work done by the Inspectors. He has also to exercise supervision over the other Inspectors, which has hitherto been the duty of the Medical Officer, and regulates the issue of disinfectants.

Special Report upon the working of the existing arrangements in connection with the duties of the Chief Inspector (as requested by the Local Government Board).

After filling the post of Medical Officer of Health for ten years, it may be interesting to review the work done, and to note some of the results as regards the sanitary conditions of the District.

Dating back as far as 1875, in consequence of serious outbreaks of Diphtheria in certain parishes of the Rural District, several special investigations have been made by Local Government Board Inspectors, viz., in 1876 by Sir Wm. Power, in 1879 by Sir R. Thorne, in 1883 by Mr. Spear, and in 1900, shortly after my appointment, by Dr. R. Sweeting, and again recently by Dr. Darra Mair.

In the year 1898, the Local Government Board drew attention to the serious prevalence of Diphtheria, which, during the last few years, had become endemic in the Rural District, and at the same time recommended, for the more efficient control of the sanitary conditions, that one Medical Officer should be appointed to take charge of the whole District instead of four, as had hitherto been the case, and I was the selected candidate.

On taking up the appointment I found it was necessary to make a house-to-house examination of the whole District, and as the inspection occupied so much of my time, I was forced to take a partner, thereby largely reducing my professional income. I visited every house in company with the Inspectors, Mr. Longhurst, Mr. Tiley, and Mr. Miles, and we found throughout the District very unsatisfactory sanitary conditions:- overflowing cesspools, drains discharging directly into the cesspools, rivers polluted with sewage, no ventilation of cesspools, and ashes filling the back yards.

To rectify such widespread defects over an area of 10 miles square, was no small undertaking.

In the year 1900 the bad state of the District, and the excessive prevalence of Diphtheria having again come to the knowledge of the Local Government Board, they sent down one of their Inspectors, Dr. Sweeting, as mentioned above, to report on the Diphtheria and general condition of the whole Union.

Dr. Sweeting's report was far from satisfactory, although prior to his visit, we had materially improved many of the more glaring defects. During the next two years, a great change was effected by steadily enforcing sanitary alterations, and by the end of the year 1903, not only had the sanitary conditions become fairly satisfactory, but a material improvement in the health records was very manifest, Diphtheria was largely stamped out, the incidence of other infectious diseases greatly diminished, and this improvement has been steadily maintained up to the present time, as shown by the annexed Table.

By studying this table, it will be seen that the number of notified infectious cases, as well as the deaths and death rates from them, have been reduced by more than one-half during the past ten years, by the persistent closure of schools and the isolation of infected persons, as well as by various sanitary alterations, such as the cleansing of houses and back yards, the disconnection of sinks, the ventilation of drains and cesspools, the abolition of open privies, which were almost universal, both in Urban and Rural localities, and by the closure of old and often polluted wells, and laying on a water supply. The mains of the old Kent Company have been widely extended, the Rural Parishes have been supplied throughout by the Mid-Kent Water Co., and there are now few hamlets without a public water supply. Practically every house bordering on the rivers Darent and Cray, drained directly into

the river, which in many instances was the source from which drinking water was supplied. At the present time no drains within our boundaries discharge into either of these rivers, and there is a marked difference in the character of these streams.

Explanation of Table.

This table shows the populations for the past 18 years: the number of notified infectious cases, also the number of cases of Diphtheria, Enteric Fever and Erysipelas, together with the deaths and death rate from each disease. I have chosen these three diseases, as they are all more or less connected with insanitary conditions, and may be called filth diseases.

From this table we find that Diphtheria became epidemic in 1895, whilst Erysipelas was very prevalent and caused many deaths as far back as the record extends, but for the purposes of comparison I take the last 12 or 13 years only, and divide them into two periods.

POPULATION.		Number of Infectious Cases Notified.	DIPHTHERIA.			ENTERIC FEVER.			ERYSIPELAS.	
1891	30190		Cases.	Deaths.	Rate.	Cases.	Deaths.	Rate.	Cases.	Deaths.
1892	33368	434	51	2		26	2		108	4
1893	34015	434	43	14	·4	14	2		99	4
1894	34662	234	78	9	·26	20	4		67	3
1895	35309	328	212	35	·97	17	3		75	3
1896	35956	532	212	35	·97	17	3		75	3
1897	36603	571	154	22	·6	14	5	·14	62	2
1898	37250	342	159	38	1·2	32	6	·16	70	2
1899	37897	389	166	29	·76	56	9	·25	59	1
1900	38544	387	128	21	·52	45	8	·22	62	5
1901	39193	379	178	24	·61	45	9	·25	47	3
1902	38080	431	107	15	·39	46	15	·35	46	2
1903	38739	203	53	8	·2	32	6	·15	47	0
1904	39305	218	36	5	·12	41	6	·15	39	0
1905	39881	271	44	10	·25	35	8	·2	32	0
1906	40371	300	34	5	·12	14	0	0	36	1
1907	40984	413	17	3	·17	8	0	0	32	2
1908	41525	245	41	6	·14	45	5	·12	25	0
Average of six years 1897 to 1902		433	156	25	·68	40	10	·16	58	2·5
Average of last six years 1903 to 1908.		274	42	8	·15	29	4	·07	35	0·5

LAST SIX YEARS. 1st SIX YEARS.

Taking these two periods of six years, 1897 to 1902, and 1903 to 1908, and comparing the average number of notifications during each period, as well as the average number of cases and deaths from Diphtheria, Enteric Fever, and Erysipelas, each of these diseases being more or less dependent on insanitary conditions, we find under each heading a remarkable falling off.

In the first period, 1897-1903, the large number of cases and the heavy mortality from Diphtheria, form a strong contrast to the figures of recent years, and it was the large number of deaths from Diphtheria in the years 1896-97, that led the Local Government Board to suggest the appointment of a single Medical Officer of Health for the whole Rural District.

For the last six years, 1904-1908, the large diminution in the average number of notifications, as well as in the cases of, and deaths from, Diphtheria, Enteric Fever and Erysipelas, is well marked; the average number of notifications falling from 433 to 274: the average number of cases of Diphtheria from 156 to 42: the deaths, from 25 to 8: and the death rate, from '79 to '15: the cases of Enteric Fever, from 40 to 29: the deaths, from 10 to 4, and the cases of Erysipelas, from 58 to 35, and deaths, from 2'5 to 0'5.

I was appointed in 1899, the middle of the first period, when Diphtheria had been epidemic for some years, but the influence of improved sanitary conditions being necessarily very gradual, no immediate result could be looked for, hence it was not until the end of 1902, that any marked falling off in these diseases began to be noticed, but from that time the diminution has been steadily maintained.

The above figures, shewing such a reduced average in notifications, as well as in deaths, for so many succeeding years, clearly proves that the decrease is not accidental. If I am correct in this assumption, I may fairly claim that my work has been successful, and the trust committed to my charge has been well carried out; at any rate, the outcome of the perusal of these tables is clear—the undue prevalence of infectious disease has been stopped, and many lives have been saved, and the action of the Local Government Board in calling for the appointment of one Medical Officer of Health instead of four, has proved very beneficial, not only by promoting improved sanitary conditions, but by checking epidemic disease, and thereby lessening expense in Hospital treatment.

From these figures and the facts deducible from them, it seems clear that the past sanitary administration has worked beneficially for the District.

Since writing the above, I have been specially requested by the Local Government Board to report on the existing arrangements in connection with the duties of the Chief Inspector of Nuisances for the District.

In the first place, I must point out that all sanitary arrangements and expenses are undertaken with the sole view of lessening the amount of sickness and infectious disease, and thereby reducing the number of deaths.

I claim that with the help of the Inspectors, I have done this most effectually, as shown by the figures of my table—that the average number of notified cases of illness, as well as the death rate, have been lowered by over one-half during the long period of six years, and thereby a large expense in hospital treatment has been saved to the ratepayers, and this is due to the improved sanitary state of the district—that the sanitary conditions are materially altered, which is confirmed by Dr. Darra Mair, as well as shewn by my figures, and this fact is accepted in the reply to the Local Government Board.

If my figures speak correctly, there can be no reason why the ratepayers should be saddled with such an expense as £200 per annum for an additional Inspector, when it can so easily be shewn that the sanitary work of the last ten years has been so successful in checking disease throughout the district.

The Local Government Board, who have to deal with the administration of all sanitary districts throughout England, when asked to confirm the appointment of Chief Inspector, objected so strongly to the ratepayers having to pay for an extra Inspector, without any sufficient, or in fact, any grounds at all being shewn, sent down one of their Inspectors, Dr. Darra Mair, to inspect the district, and report on its administration. The District Council have sent their reply, and it is on this reply I am now asked to report, giving my experiences of the working of the new arrangements. My opinion, as Medical Officer, has never hitherto been asked, nor have I at any time been consulted on the policy of appointing a Chief Inspector. It creates a new position, which only affects me as regards my relations with the Inspectors, who have hitherto been under my authority and obeyed my orders, but now they have also to obey all orders of the Chief Inspector, and they do not know whether they are under me or the Chief Inspector, or what my exact status may be. To me, it seems an invidious position, and one which I do not think any Medical Officer ought to be put into.

To understand the question fairly, Dr. Darra Mair's very clear and convincing report should be read carefully, a report made after an exhaustive inspection of the district, and a lengthened interview with each Inspector, in which he states as the outcome of his enquiries, "that the position of Chief Inspector is a very anomalous one, as he is working independently of the Medical Officer of Health, whom he rarely sees; that owing to the Inspectors being under his orders, as well as under the Medical Officer of Health, a division of authority necessarily occurs, which must prove unworkable, and that there is an unreasonable overlapping of functions and waste of time, which is anything but businesslike."

Such are Dr. Darra Mair's conclusions, and he goes on to suggest another arrangement to the effect that the Inspectors, instead of being increased by an additional Chief Inspector, should be reduced to three, and that the present Chief Inspector should be promoted to the post of *Surveyor*, with entire charge of the sewerage, administration and scavenging, the work of the remaining three being confined to their proper duties as Sanitary Inspectors.

By this re-arrangement, Mr. Goreham, as Surveyor, would retain his present salary, whilst that of the other Inspectors would, as regards one-half, be refunded from County funds, thus the total payments for Inspectors' salaries, would be reduced from £741 per annum, as under the present system, to £425 showing a saving of £316 in each year.

This large reduction in cost can be obtained without materially altering the duties of the Inspectors, now that Sutton is sewered, as the work of the Inspector of that district will be so much lessened that some re-adjustment will be necessary. There will still be a small amount of cesspool emptying for Sutton, as well as for Crayford, whilst that for Stone and Swanscombe will remain as hitherto, in addition to the scavenging for all the parishes. Dr. Darra Mair apportions all this work to the Surveyor, such work not being usual for Sanitary Inspectors in other districts throughout England.

Mr. Macpherson, the Chairman of the Sanitary Committee, whilst objecting to this proposal, argues that the Council would lose control over their officers by accepting repayment of half their salary from County funds, forgot to mention that he had applied for this repayment in the case of the Chief Inspector, and it was this application which led to Dr. Darra Mair being sent down by the Local Government Board, we may therefore dismiss this question of local control as of little moment, and as being only an afterthought, for intervention by the Local Government Board is exceedingly rare, and is not likely to arise, except under very peculiar and unlikely contingencies.

This is the only substantial argument against the adoption of Dr. Mair's suggested alterations, and the saving thereby effected. We must now consider how far the appointment of a Chief Inspector, is detrimental or advantageous to the sanitary administration of the District.

In the first place, the resulting division of authority must interfere with the relations which always have and must exist between the Medical Officer of Health and his Inspectors, by having another Inspector, working independently, and with absolute powers to order about his fellow officers, and arrange their duties, without consulting the Medical Officer of Health, even to the extent of fixing their holidays. The position of the Medical Officer of Health is reduced to that of a nonentity, and the ultimate result must be inefficiency, which already is beginning to show itself. The Inspectors have been ordered to make a weekly report of their work to the Chief Inspector, but not to the Medical Officer of Health, consequently the Medical Officer of Health may or may not know what is going on, as actually happens, no reports coming to him. He rarely sees the Chief Inspector. This is certainly not conducive to efficient working of the administration.

The Chief Inspector has to make a fortnightly report to the Council, but these reports give evidence of no independent work, being merely a few extracts from those sent by the other Inspectors, together with an application for some requisites for cesspool emptying, &c. If Dr. Mair's suggestions were adopted, these items might be applied for by the Surveyor, and the reports of the Inspectors, rendered by the Medical Officer of Health.

He also attends the meetings of the Council in place of the other Inspectors. This is a very doubtful benefit as the Inspectors, who are not in the position of ordinary servants, working at so much per hour, by attending these meetings did not waste much time, and by being present were ready to answer any questions as they might arise, which the Chief Inspector is often unable to do; moreover by meeting together and comparing notes they gain a knowledge of what is going on elsewhere, a procedure which is undoubtedly useful and tends to efficiency in the delicate details of their work.

Granting that it is waste of time for the Inspectors to attend these meetings, what must be said of the waste of time which is of daily occurrence from two men doing the work of one in a Rural District where the distances are so great, more especially when, as I have already shewn, the same work has been done in past years with such satisfactory results.

Mr. Macpherson who originated the idea of a Chief Inspector, and who drew up the reply sent to the Local Government Board, states that there is no overlapping, but I think he is mistaken.

To refute this statement, and in endeavouring to confirm Dr. Mair's conclusion, that there is considerable overlapping of functions, I must now give some details showing how constantly this occurs, although this is somewhat difficult in the short space at my disposal.

On perusing the fortnightly reports of the Chief Inspector, we find that he has visited various places, but these visits are made in addition to the Inspector's visit, after receiving the weekly report and apparently without any object. This I call overlapping, but to find substantial proof of this duality of work and overlapping of duties, as I mentioned to the Council, we cannot do better than examine the Chief Inspector's report of work done during 1908. (See Inspector's reports at end).

Taking this report line by line and examining it under each heading, we notice that the work detailed is merely a summary of work done by the other Inspectors and myself, but he has spent a great deal of time in visiting distant places. This is a duplication of work and overlapping, as the Inspector has already dealt with the nuisance, and the Chief Inspector's visit is superfluous.

He speaks of inspections with regard to overcrowding and nuisances:—To this I reply, “**He has undoubtedly visited many of these cases, but it was a duplication of work, as they had all been visited previously and dealt with by the Inspector.**”

There were 10 Board orders issued:—“**On complaints by the local Inspector.**”

A case of diseased meat exposed for sale.—“**This occurred whilst he was on his holiday, attended to by myself and Mr. Miles.**”

Circular notices re “humane slaughtering of animals,” were sent out. Dairies, Cowsheds, Slaughterhouses, &c:—“**All visited by local Inspectors.**”

Black Huts, Crayford, and Howberry Farm Cottages:—“**Both attended to by myself.**”

Stables &c, erected at Slades Green :—“ **Surveyor's work.**”

Stables erected at Greenhithe for carrying on cesspool work by the Council: Surveyor employed :—“ **Sewage removal work.**”

Tips provided by Chief Inspector himself :—“ **Sewage removal work.**”

Horton Kirby, Little Boys' Home, a new Sewer :—“ **Surveyor's work, also Mr. Tiley's, and my own.**”

Connections to sewer, Crayford :—“ **Inspector's work.**”

Connections to sewer, Eynsford :—“ **Arranged by myself and Mr. Tiley.**”

Septic treatment of sewage at Knockholt :—“ **Surveyor's plans and Inspector's work.**”

This is the first I have heard of this, except from private sources.

It is clear that in all these details, there can be no need of an additional Officer, as in former years exactly similar work has been carried out by the Inspectors, of which Mr. Goreham himself was one, with equal success, and it is manifest that in all these details there has been unnecessary overlapping and duplication of functions, two, and even in some cases, three officers attending to the same thing.

My object in referring to this report is only to show how the work of the Chief Inspector is mainly to follow after the other Officers. Dr. Mair may well say this is not businesslike.

I can further recall a few other instances of unnecessary duplication of functions :—

Swanley Village School was inspected by the County Medical Officer of Health :—**The Chief Inspector was there as well as Inspector Tiley and myself with the foreman and others.**

I complained of the new ventilating shafts at Swanley Junction being too low :—“ **The Chief Inspector, Mr. Tiley, and myself, inspected.**”

Huts at Swanley (under Mr. Tiley's charge) :—“ **The Chief Inspector constantly visiting.**”

Huts at Longfield, &c. (under Mr. Longhurst) :—“ **The Chief Inspector constantly visiting.**”

Longfield Siding :—“ **Special report by myself. The Chief Inspector, with Mr. Longhurst, frequently visiting.**”

Longfield (Pinden) nuisance :—“ **Mr. Longhurst daily, the Chief Inspector frequently.**”

Longfield Station (unloading manure) :—“ **Both Inspectors frequently visiting.**”

Hartley School drainage :—“ **Surveyor's plans, the Chief Inspector and Mr. Longhurst frequently, and myself.**”

Longfield cesspool emptying :—“ **Both Inspectors, very frequently.**”

Gipsy encampment, Hodsoll Street, Ash (ten miles distant) :—“ **Mr. Longhurst and myself, the Chief Inspector visiting later.**”

Southfleet, Cook's yard :—“ **Both Inspectors visiting.**”

Overcrowding, Hextable :—“ **Both Inspectors, as well as myself, visiting.**”

New schools, Hextable :— **Ditto.** **ditto.**

Wilmington, Reeves' cottages :—“ **Mr. Miles, as well as myself with Chief Inspector.**”

Courtenay Avenue sewer :—“ **Surveyor employed on my report : Chief Inspector, constantly.**”

Crayford, Arthur Street, inspected :—“ **The two Inspectors with myself.**”

Crayford, old houses to be pulled down :—“ **The Chief Inspector frequently, although arranged by myself.**”

Crayford, Westbourne Grove :—“ **The Chief Inspector frequently, although arranged by myself.**”

Hawley drainage :—“ **Two Inspectors, also myself.**”

These are only a few instances of ordinary Sanitary Inspectors' work which I can recall at the moment, but they are sufficient to convince any unprejudiced person that there has been a considerable duplication of work, two men doing the work of one, which was quite unnecessary and which certainly does not call for a heavy additional expense by appointing a Chief Inspector, more especially after the proofs I have given of good work in past years.

Mr. Macpherson, when suggesting to the Council that Mr. Goreham should be appointed as an additional Inspector at the salary of £200 per annum, persuaded them that they would make a saving by doing so and have improved sanitation, but he did not tell us in what way the sanitation fell short or how this large saving was to be made.

I can see that there must be a saving under the head of cesspool emptying, but this has come about through the initiative of Mr. Pankhurst, the member for Crayford, to whom all the credit is due

He suggested a scheme for Crayford to have its own horses and men for cesspool emptying and scavenging and to do away with contract work, and this has resulted in a considerable saving in expense and in more efficient work, especially as regards scavenging.

The members for Stone and Greenhithe, following Mr. Pankhurst's example, last year started the same plan and no doubt there may be a saving after the preliminary expenses of building stables, &c. are paid off. This is what I have myself suggested in my annual reports year after year, but it is Mr. Pankhurst whom we must thank for bringing it forward and putting it into execution. In addition to any saving in cost, there is another still greater advantage that the scavenging is now done by our own workmen more regularly and more thoroughly, and this explains the improvement in the back-yards of Crayford.

Whilst I am of opinion that any saving in sewage removal and scavenging operations is due to Mr. Pankhurst's initiative, I recognise also that as a result of handing over the charge of disinfectants to the Chief Inspector, there has been a saving under this head, but this should have been done long ago, as the disinfectants have been left without anyone to supervise them. The bulk of these disinfectants are used to deodorise the cesspools on being opened, and they are supplied under contract by the Council, but there has hitherto been no one to keep count of the amount used, owing to there being no recognised head for this department.

The saving under this heading has partly arisen from an arrangement I made some time back with the Chief Inspector, to try the use of Sulphate of Iron instead of Permanganate, for deodorising cesspools. This has resulted in a lessened expense, but at the same time, the odour from the Sulphate is most objectionable, being even worse than the smell from the cesspool itself, consequently we shall have to discontinue its use in populous places, and return to the Permanganate, although as an oxidizing agent its action cannot be surpassed.

Another reason for diminished cost is the large reduction in the amount of disinfectants used, but it is questionable whether the quantities now supplied are sufficient for complete disinfection, more particularly in cases of infectious disease, and in all probability the cost will again go up slightly, from our using more Permanganate instead of the Sulphate, and issuing household disinfectants in larger quantities, on the other hand, a much smaller quantity will suffice for Sutton-at-Hone and Crockenhill, owing to the completion of the new sewer.

A large saving in expense over disinfectants has also been effected by discontinuing public cesspool emptying in the Rural parishes.

To sum up what I have written :—

First of all, I have shewn fairly conclusively that for many years infectious diseases and deaths from them have been largely reduced, and consequently a considerable saving in the cost of isolation has been effected by improved sanitation.

Secondly, I maintain that on sanitary grounds there was no call for any such appointment as an additional Inspector, and that it has led to considerable overlapping of duties—two men doing the work of one: that it has interfered with the work of the other officers, and led to an unworkable state of dual authority without any need having been shewn for it, and that it has in no way led to any increased efficiency, but on the contrary, it has increased the cost of the sanitary administration without any visible benefit, and has been condemned by the Local Government Board.

On the other hand Dr. Darra Mair has suggested to us an alternative scheme, which on the face of it appears simple and very workable, as, whilst making a very slight alteration in the work of the staff, it largely reduces the expenditure. It places each department under definite responsible heads, each one taking charge of and reporting on his own department.

To me it seems clear that in the past the great want has been a definite head to carry on the sanitary administration. I, as Medical Officer of Health, have not only looked after my own proper duties, but generally supervised the cesspool department, but the Council have never acknowledged this position, and have always looked to the special Inspector for information when any question has been raised. This want of a single head to manage such important work has been unsatisfactory, and even now, with a Chief Inspector, the results fall short of what they would be with one officer in charge instead of two.

By adopting Dr. Mair's scheme the whole administration would be simplified. The Surveyor would take charge of his own department, instead of, as now, leaving the working of it to the local Inspector, he would then be personally responsible for every detail and should furnish a quarterly statement as to all work done, together with full details of expense as might be desirable.

The Medical Officer of Health should also present a similar quarterly report on sanitary matters with details of the Inspectors' reports.

With the reports thus issued quarterly in a printed form, the Council would be better able to follow the work of each department, instead of having once a fortnight, a few disjointed statements of visits made without any details connected with them, as, for instance the report states "so many trucks of refuse unloaded at Longfield siding," or "so many loads taken from so many cesspools in Sutton-at-Hone." This gives very little idea as to what the reference may be, and the Council are little wiser as to the work done.

As regards the reduction of Inspectors from four to three I am not in favour of it, owing to the wide extent of the various districts. There used to be three Inspectors before I was appointed and it was found unsatisfactory, although their not having scavenging duties to attend to would make a difference.

Longfield is a natural centre for one district; Swanley for another; Stone and Swanscombe for a third, to attach Crayford to either of these might be possible, but in dealing with infectious cases in an epidemic outbreak many difficulties might easily arise, as it is no uncommon thing for two, three, or even more cases to occur on the same day at places widely separated, hence it would be almost impossible to attend to the removal of the patients and the disinfection of the houses without undue delay. I should also point out that unless Stone and Swanscombe are sewered, or the Surveyor takes over the entire management of cesspool emptying and scavenging, no Inspector could undertake a Parish like Crayford, in addition to two such Parishes as Stone and Swanscombe, in their present state, as the complaints of overflowing cesspools are constant.

To divide the Rural District into three workable divisions is not easy; if we take population as a basis, it seems impossible, owing to the populous centres being so far apart, but combining acreage with population, it might be divided thus—Stone and Swanscombe, together with Southfleet and possibly Darenth; and Crayford with Wilmington joined to Sutton-at-Hone with Crockenhill; each of these districts would represent, say 8,000 acres and 15,000 population, whilst for the remaining country parishes, there would be left 20,000 acres and 8,000 to 9,000 population, mainly rural. This division would entail a change of district as well as of residence for one Inspector at least. On the whole I am sure the work would be more efficiently carried on by retaining the four Inspectors, and the cost would not be much greater, if half payment be accepted. With these remarks I leave this matter, and in conclusion, can only add that, as Medical Officer of Health, I have endeavoured to give an unbiassed opinion in stating the grounds on which I dissent from the reply sent to the Local Government Board.

The time has been short for writing this report. I have used Mr. Goreham's report for the purpose of illustrating my contention that there is overlapping of functions, but without any idea of

criticising it, as it is the only authoritative statement of work done on which I could comment. It gives many items of work carried out, yet it fails to indicate any benefit arising from the creation of this new office. I have much pleasure in saying that Mr. Goreham has made the best of a very peculiar and difficult position, and has carried out his duties with great zeal and ability, and I must thank him for his tact and courtesy under very trying conditions, as it is no fault of his that he has had to perform duties belonging to the other Inspectors.

The District is divided into four sub-districts: -No. 1, Longfield. No. 2, Crayford. No. 3, Stone and Swanscombe. No. 4, Sutton-at-Hone.

No. 1, Longfield, the largest, under Mr. Longhurst's charge is entirely Rural, including the parishes of Ash, Fawkham, Hartley, Kingsdown, Longfield, Ridley and Southfleet, comprising 17,590 acres, with the small population of 3,466. The work of Sewage disposal and Scavenging in these parishes, is no longer dealt with by the Council, and up to the present time, the new system has worked without any great difficulty.

No. 2, Crayford, with an acreage of 6,500 and a population of nearly 1,200, in charge of Mr. Miles, is sewered, and all possible houses are connected with the sewer, the remainder have cesspools, which are emptied by the sanitary vans. The Council have their own horses, and employ their own men under Mr. Miles's supervision, and during the past year they have erected stabling on part of the land adjoining the Pumping Station at Slades Green. This has proved most beneficial, as regards efficiency in the scavenging work.

Wilmington and Darenth, with a small corner of Sutton-at-Hone, are also under Mr. Miles's charge. It would be a great improvement if the Council extended the system of employing their own horses and men to these two parishes, instead of doing the work by contract.

No. 3, Stone and Swanscombe, in charge of Inspector Caffyn, has an acreage of 5,150 and a population of 12,100. During the past year, the cesspool emptying and scavenging have been carried on by the Council without any contract, whereby a slight saving has been effected. Stables, &c., have been erected on ground rented from the New Globe Co. They have their own men and horses.

No. 4, Sutton-at-Hone and Swanley Junction sub-division, including the parishes of Sutton-at-Hone, Horton Kirby, Farningham and Eynsford with Lullingstone, having an acreage of about 14,000, with a population of 11,700, is in charge of Mr. Tiley. The larger portion of Farningham and Eynsford have for many years drained directly into the Darenth Valley Sewer, all other parts being worked by the sanitary vans under contract. With the close of the present year, this cesspool system of drainage will have come to an end in the parish of Sutton-at-Hone and the Crockenhill Ward of Eynsford, as the sewer for these places is now open and connections are being rapidly made. This will remove a great grievance, as the cesspool vans were a constant nuisance, and at Swanley Junction

by their too frequent presence, at the same time it is worthy of note that Swanley Junction and the rest of the parish of Sutton-at-Hone, in spite of these annoyances, is remarkably healthy with a death rate of only 11 per 1,000.

Another improvement has been effected in Horton Kirby parish, by the construction of a short sewer, connecting the Little Boys' Home at South Darenth, with the main sewer, which will save a large amount of van work.

Sanitary Conditions.—I have already shewn by my examination of the foregoing table of filth diseases that the sanitary conditions throughout the District are satisfactory. The Inspectors have done their work well, and considering that they have some 2,000 houses apiece to look after, many of them widely distant, besides having to deal with the removal and disinfection of all cases of infectious disease, and being responsible for the cesspool emptying over such an area, they have their time fully occupied.

The house accommodation is very varied, that of the semi-urban districts being very different from the rural parts; on the whole, the cottages are comfortable and the sanitary conveniences satisfactory, although in some of the distant villages, many of the older wooden buildings hardly come up to modern ideas, but these are low rented and are possibly quite as comfortable to live in as the more modern Urban buildings.

Bye-laws.—New Bye-laws will shortly be issued, both for Buildings and Sanitary purposes. They will be compiled from the model Bye-laws issued by the Local Government Board, with special regulations applying to these outlying parishes, which now empty their own cesspools and get rid of their own ashes.

Fruit-pickers' Huts, Barns, Tents and Caravans.—During the past year the hut question has caused very little trouble, as the farmers have kept good supervision over them, and their sanitary conditions have been well looked after by the Inspectors, but in consequence of the wet weather in the early summer, many of the tent dwellers, who have been more numerous than ever before in consequence of so many huts having been pulled down, suffered rather severely from exposure to the damp and rain.

Abatement of Nuisances and Inspection of the District.—The reports of the Inspectors (see end) give a detailed summary of their work, and show how thoroughly the sanitation of the District is supervised by them. They frequently accompany me in my round of visits, making house-to-house inspections, and inquiring into special insanitary conditions. For the most part little difficulty is experienced in getting defects put right, but occasionally special orders are required.

During the past year many important sanitary matters and various questions of great urgency and detail have come before the Council. The following are some of the most important:—

The sewerage of Sutton-at-Hone has been completed, as previously stated, and a short drain, connecting the Little Boys' Home, South Darenth, with the main Sewer, has been laid, which will diminish the cost of cesspool emptying for Horton Kirby. Arrangements have been completed for redraining Courtenay Avenue, which has been in a very unsatisfactory condition for many years. In Crayford we have had subsidence of the sewer in several places, partly from faulty construction, but also from the sandy nature of the soil.

Complaints have been made about pollution of the middle river, by the waste water from Bowron's Tan Yard, and objections were urged by the West Kent Sewer Board against its admission into the Sewer, but this difficulty has been overcome.

The nuisance from the cartage of London refuse into various parts of the Districts, has caused much unpleasantness. At Bexley and Crayford, this nuisance has been finally stopped, and will not recur; but at Pinden, near Longfield, large quantities are still being deposited in the gravel pits, but no great nuisance has resulted, as it has been forthwith more or less covered with soil. The time is close at hand when this nuisance will have to cease altogether by order of the Court.

Although the Pinden nuisance has been kept within moderate bounds, it has been started again further up the valley at Longfield siding. This siding which is the property of the Newington Vestry, is kept remarkably clean, and is no nuisance, but the South Eastern and Chatham Railway have a small siding alongside, to which Messrs. Martin are now carting this refuse, but I understand that this is only a temporary affair, as the stuff is brought for agricultural purposes, and will be discontinued forthwith.

A similar nuisance was started near Stone Village last spring, which was so serious that a magistrate's order was at once obtained, and the nuisance was immediately abated.

A long row of cottages have been erected in Knockhall Lane, Greenhithe, with drainage into a septic tank, the effluent to be discharged on to the land some little distance off, and away from any other houses. I don't think any nuisance can possibly arise from this effluent.

Smoke Nuisance.—The Smoke Nuisance at Swanscombe has been greatly mitigated by the erection of lofty chimneys at White's Cement Works, but at Greenhithe it is very great from the new chimneys not being of sufficient height, consequently the surrounding houses are perpetually enveloped in smoke.

Unmade Roads.—Several unmade roads in various parts of the districts, are in a deplorable condition, but unfortunately it is nobody's business to attend to these matters, unless they can be pronounced injurious to health, which cannot always be said; one in particular, The Chase, Greenhithe, was condemned some five years ago by a Local Government Board Inspector, as injurious to health,

and powers were granted for making it up, but nothing has been done and it is practically almost impassable. There is another bad road at Longfield, but this I think will shortly be made good. There are some other short roads on steep ascents, which are dangerous from ruts made by storm water, and which would cost little to be made good.

Water Supply.—We have very few wells, except in outlying places, where the houses are too few to pay for laying the mains. This applies to the parish of Ridley, where there are no wells, and rain water tanks constitute the only supply, but there are only a few houses in this parish.

The Milk Supply.—The milk is perhaps slightly better than it was a few years back, but this all important article of diet is in charge of the police, who take samples for analysis from time to time, but if any report is made, it is not published, and much of its value is wasted. A fully detailed report on the results of milk analysis, should be furnished by the police to the sanitary authority at least once a quarter, and I would call the attention of the County Medical Officer to this defect, as it is most important that the results of this analysis should be widely known in each locality, both in the interest of the milksellers as well as of the public. Most of the milk is imported, which in itself is a certain amount of guarantee, as it has probably been under supervision at the farm, whence it comes. I should advise that all milk be carefully boiled before being used, more especially when it is for feeding young children.

Dairies, Cowsheds, and places where cows are milked, are kept better than they used to be, but it is difficult to make those in charge of cows realise that absolute cleanliness is necessary, not only in keeping the cowsheds clean, but also the animals themselves, and the hands of those who milk.

The Isolation Hospital, which takes in cases of Scarlet Fever, Diphtheria, and Enteric Fever, has at present accommodation for 72 patients. It has not been so crowded during the past year, except in the Enteric ward, which at one time was not able to take in nearly all the cases, owing to the epidemic at Slades Green, but an enlargement has now been carried out and is nearly completed, which will not only increase the accommodation, but also allow the acute cases to be separated from the milder or convalescent ones, as there are grounds for thinking that a convalescent child, directly discharged from a ward with acute cases, is more prone to carry away infection than it would be if previously isolated with other convalescents. If this change were made, the risk of carrying infection from the Hospital would be much diminished, and what we call "return cases" would less frequently occur. By a "return case" we mean another member of the family or a neighbour catching the disease from a child recently returned from Hospital, and apparently perfectly convalescent and free from infection.

Factory and Workshop Act.—We have no indoor Factories or Workshops where several hands are employed, and all of our Factories are under the supervision of the Factory Inspector. The sanitary conditions of the existing Factories and Workshops are satisfactory. They are kept under close supervision by the Inspectors, no difficulty being experienced in having any defects remedied.

There are several large Paper Mills, also two steam Laundries, all of which are well provided with the necessary conveniences, and are kept clean and in good order.

There are 44 Bakehouses in the district, of which 6 are underground, and all are certified. They are all in a satisfactory state, well lighted, and kept regularly washwashed.

Home Work.—We have only two Millinery and Dressmaking establishments where two or more hands are employed, and no home work is carried on.

Each Inspector keeps a register of all Factories, Workshops, and Workplaces, for his own district.

Summary of the Official Statistical Tables in connection with Factories, Workshops, and Home Work.

1.—Inspections.

	Number of		
	Inspections	Written Notices.	Prosecutions.
Factories (Including Factory Laundries).	33	—	—
Workshops (Including Factory Laundries)	—	—	—
Workplaces	114	8	—
Total ...	147	8	—

2.—Defects Found.

	Number of Defects.			
	Found.	Remedied.	Referred to H.M. Inspector.	Number of Prosecutions.
<i>Nuisances under the Public Health Acts—</i>				
Want of Cleanliness	1	1	—	—
Want of Drainage of Floors	—	—	—	—
Other Nuisances	1	1	—	—
Sanitary accommodation unsuitable (not separate for sexes)	—	—	—	—
Offences under Factory and Workshop Act	—	—	—	—
Breach of special sanitary requirements for Bakehouses	5	5	—	—
Total ...	7	7	—	—

3.—Home Work. None.

4.—Registered Workshops.		5.—Other Matters.	
Workshops on the Register at end of year.	Number.	Class.	Number.
Laundries	4	Matters notified to H.M. Inspector of	
Bakers	44	Factories	—
Dressmakers	9	Action taken in matters under Public	
Others	57	Health Act	—
		Notified by H.M. Inspector	—
		Underground Bakehouses in use at end of	
		year	6
Total ...	114	Total	6

Population, 41,525.

During the past year there have been 954 births and 413 deaths, which gives 541 as the natural increase of population from the excess of births over deaths, and brings the number up to 41,525.

Last year I estimated the population of the Rural District at 40,984.

The following is a list of the Public Institutions in the District, and the annexed table gives the average number of inmates :-

Name of Institution.	Inmates.	Staff. (Inside).	Staff (Outside).	Total.
Metropolitan Imbecile Asylum, Darenth	1933	230	141	2304
City of London Mental Hospital, Stone	289	85	67	722
Do. do. private patients {	281	—	—	—
Gore Farm Hospital	669	287	29	876
Parkwood Convalescent Home, Horton Kirby, near Swanley	96	29	11	136
Kettlewell St. Bartholomew's Convalescent Hospital, Swanley Junction	57	15	2	74
Little Boys' Home, Hextable	168	15	7	190
Little Boys' Home, South Darenth	300	35	22	357
White Oak Schools Ophthalmic Hospital, Swanley Junction	270	60	25	355
St. Mary's Home, Stone	54	13	3	70
"Arethusa" Training Ship for Boys (off Greenhithe)	225	2	16	243
"Warspite," Marine Society's Ship	185	2	14	201
"Worcester," Training College, Mercantile Marine...	166	40	—	206

The following Table gives the area, etc., of each Parish in Acres, Inhabited Houses, Population, Persons per acre, Persons per house, Births, Deaths, Families per house, and Death Rates.

SUB-DISTRICTS.	Parishes.	Acreage.	Number of Inhabited Houses.			Population.						Persons per acre.	Persons per house.	Deaths.	Births.	No. of Families.	Deaths under 1 year.	Death Rate.
			1881	1891	1901	1881	1891	1901	1909	Males.	Females.							
No. I. LONGFIELD. Mr. Longhurst. Acreage, 12,144. Population, 3,834.	Kingsdown	2813	81	85	99	411	412	506	556	258	248	17	5.1	7	9	103	1	12.6
	Ash	3074	139	139	128	632	619	608	667	318	290	19	4.7	9	11	133	3	13.5
	Ridley	834	15	15	14	65	86	64	69	33	31	07	4.0	3	3	14	—	43.5
	Hartley	1211	62	56	63	254	272	284	313	154	130	23	4.5	2	8	63	1	6.3
	Fawkham	1198	46	53	55	237	232	276	305	130	146	23	5.0	4	5	55	1	13.1
	Longfield	605	63	99	128	328	498	617	719	317	300	10	4.8	9	20	129	2	12.5
No. II. CRAYFORD. Mr. Miles. Acreage, 6,396. Population, 13,191.	Southfleet	2409	190	202	222	922	968	1111	1205	573	538	45	5.0	9	33	227	4	7.4
	Crayford	2455	872	1045	1272	4347	5268	6572	7422	3493	3109	2.67	5.0	80	200	1314	14	10.7
	Wilmington	1718	277	352	402	1388	1722	1932	2169	985	947	1.12	4.0	27	59	433	7	12.4
No. III. SWANSCOMBE. Mr. Caffyn. Acreage, 5,150. Population, 13,621.	Darenth	2223	146	155	191	700	2801	3493	3600	1697	1796	41	4.8	9	29	211	2	2.4
	Swanscombe	2141	720	1194	1329	4541	6577	6975	7722	3758	3217	3.2	5.2	81	184	1375	14	10.4
	Stone	3009	347	570	852	2550	3781	5131	5899	2629	2502	1.7	6.0	44	150	889	15	7.4
No. IV. SUTTON-AT-HONE. Mr. Tiley. Acreage, 14,306. Population, 10,879.	Sutton-at-Hone	3625	403	691	879	2063	3847	4650	5178	2289	2361	1.77	5.3	58	132	912	9	11.2
	Horton Kirby	2841	247	274	314	1541	1551	1884	2019	1104	780	66	6.0	27	39	305	5	13.3
	Lullingstone	1557	11	13	15	73	64	97	114	46	51	06	6.4	—	2	15	—	—
	Crockenhill	—	—	182	190	820	892	1089	—	571	578	—	—	—	—	—	8	—
	Eynsford	3544	332	376	404	1700	1841	2004	2155	1037	967	56	4.5	28	47	427	—	12.9
	Eynsford	—	—	194	214	830	949	915	—	466	449	—	—	—	—	—	2	—
Totals	Farningham	2739	159	165	242	892	879	1328	1413	657	671	48	5.4	16	23	281	5	11.3
	Totals	37996	1109	5494	6609	22649	31418	37832	41525	19448	18084	9	5.0	413	954	6886	93	9.9

Births, 954.

There were 954 births (492 males and 462 females), a decrease of 4·6 on 1907. This is the smallest number of births recorded for the Rural District, being nearly 100 below the average of the past ten years, and this decrease amounts to about 10 per cent on all births.

Of these 954 births, 20 were illegitimate, equal to 2·1 per cent.

The following table gives the births for each quarter :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Males	110	141	121	120	492
Females	127	121	113	101	462
Total ...	237	262	234	221	954

Birth Rate, 22·9.

The birth rate for the year, 1908 is 22·9, whilst that for England and Wales is 26·2 per 1,000 of the population and lower than that of any other year on record.

The Birth rate for the Dartford Urban District is 28·79.

The following table gives the Birth and Death Rates for the past ten years :—

Year.	Birth Rate per 1,000.	Death Rate per 1,000.
1899	28·6	14·3
1900	28·3	13·2
1901	27·9	14·5
1902	29·2	13·7
1903	27·2	10·2
1904	25·9	11·5
1905	24·5	10·1
1906	23·8	11·8
1907	24·4	9·4
1908	22·9	9·9
Average for 10 years :—	26·2	11·8

Deaths, 413.

During 1908, 448 persons were registered as dying within the district, (226 males, 222 females), and 58 (35 males, 23 females) in Public Institutions outside, viz., the Workhouse and Hospitals. These figures are about the same as last year, when the number was 437, and these two years show the smallest mortality for many years.

Of these deaths 93 occurred amongst persons not belonging to the district, being patients in the following institutions viz:—Darenth Asylum, 59 deaths, Gore Farm Hospital (Scarlet Fever), 5 deaths, City of London Mental Hospital, 29 deaths—equal 93.

These 448 deaths represent the total number registered within the Rural District, but to arrive at the exact or corrected number of deaths, 93 non-residents have to be deducted, whilst 58 residents belonging to the various parishes, who died in the Public Institutions, outside the district, have to be added, viz., in Dartford Union Workhouse Infirmary, 42; Bow Arrow Hospital, 16—equal 58, hence after deducting 93 from 448 and adding 58, we have 413 as the corrected number of deaths.

The deaths for each quarter were as follows:—

Quarter ending.	31st March.	30th June.	30th Sept.	31st Dec.	Totals.
Whole District... ..	92	76	82	105	353
Public Institutions within the District	34	24	20	15	93
Total .	126	100	102	120	448
Public Institutions without the District	20	15	10	13	58
Total ...					506

Death Rate, 9.9.

448 deaths with a population of 41,525 gives a gross death rate of 10.54, whilst that for England and Wales (Rural) is 14.7 per 1,000, which is the same as the year 1907 and lower than the rate for any previous year on record, and lower than the average of the last ten years.

Death rates from various Constitutional and Infectious Diseases:—

Phthisis, 0.84. All Tubercular diseases, 1.27. Cancer, 0.6.

Scarlet Fever, 0.09. Diphtheria, 0.014. Enteric Fever, 0.12.

Infant Mortality.

	1908	1907	1906	1905
The deaths of infants under 1 year were - - - - -	93	96	133	96
„ „ persons between 1 year and 60 were - - - - -	211	150	187	177
„ „ „ „ 60 years and upwards were - - - - -	109	141	153	131
Totals -	413	387	473	404

The rate of mortality of infants under 1 year was again very low, viz. 97·4 per 1,000 births, practically the same as last year, the average rate for the past ten years being 130, whilst that for the Rural Districts of England and Wales was 110.

The infant death rate per 1,000 deaths equals 225, and to the whole population is 2·2 per 1,000.

The average number of deaths of infants under one year for the past ten years amounts to 129.

The deaths for each quarter were:—

1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
18	16	29	30

The following table gives the causes and distribution of the 93 deaths of infants under one year:—

DISEASES.	Ash.	Crayford.	Darenth.	Eynsford.	Farningham.	Fawkham.	Hartley.	Horton Kirby.	Kingsdown.	Longfield.	Southfleet.	Stone.	Sutton-at-Hone.	Swanscombe.	Wilmington.	Totals.
Measles	—	1	—	—	—	—	—	—	—	—	—	1	—	1	—	3
Whooping Cough	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diarrhœa	—	1	—	4	—	—	1	1	—	—	1	4	1	2	2	17
Tuberculosis	—	1	—	—	1	—	—	—	—	—	—	—	1	—	—	3
Bronchitis	—	3	—	—	2	—	—	1	—	—	—	3	1	1	2	13
Pneumonia	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2
Premature Birth	—	2	—	2	1	1	—	—	—	—	—	2	2	2	1	13
All other Diseases	3	6	2	4	1	—	—	2	1	1	3	5	4	8	2	42
Totals ...	3	14	2	10	5	1	1	5	1	2	4	15	9	14	7	93

Table V.

Infantile Death Rates for the past ten years.

Table V. (see tables at end) gives the number of deaths among infants, from the first week to the end of the first year. This table for one year alone is not very reliable, but by taking a series of years, very important data can be gathered with reference to the mortality of the first few months of infantile life, and with this object in view I have compiled Table VI., which, being the sum of the tables of the past ten years, it may be interesting to compare with Table V. of the present year. I have also worked out the following Tables A., B., C., D., E., and F., giving the percentages of infant mortality during the ten years 1899 to 1908.

Table A.—Deaths under one year per 1,000 Births in each instance.

					Lowest Year.	Highest Year.
Deaths under one in the ten years	...	125—ranging from 96 to 174	...	(1905)	...	(1901)
„ „ Legitimate	...	128 „ 89 „ 197	...	(1905)	...	(1901)
„ „ Illegitimate	...	378 „ 296 „ 609	...	(1905)	...	(1902)

Table B.—Percentage of deaths at various ages under one year, of deaths at all ages.

						Lowest Year.	Highest Year.
Under one week in the ten years ...	...	5·4—varying from	4·2 to 7·3	...	(1905)	...	(1903)
„ „ month „ „ ...	...	9·0	„ 7·6 „ 10·3	...	(1905)	...	(1902-03)
„ three months „ „ ...	...	14·6	„ 2·6 „ 16·1	...	(1905)	...	(1901)
„ six „ „ „ ...	...	19·6	„ 18·1 „ 21·8	...	(1906)	...	(1901)
„ nine „ „ „ ...	...	24·2	„ 20·5 „ 29·9	...	(1905)	...	(1901)
„ twelve „ „ „ ...	...	27·7	„ 23·8 „ 33·4	...	(1905)	...	(1901)

Table C.—Percentage of deaths at various ages under one, of total deaths under one year.

					Lowest Year.		Highest Year.	
Under one week in the ten years	...	19·6—varying from	13·1 to	27·4	...	(1901)	...	(1903)
„ „ month „ „	...	32·4	„	27·2 „ 38·7	...	(1901)	...	(1903)
„ three months „	...	52·7	„	45·5 „ 56·4	...	(1900)	...	(1902)
„ six „ „ „	...	70·7	„	64·3 „ 75·7	...	(1900)	...	(1901)
„ nine „ „ „	...	87·2	„	83·0 „ 89·5	...	(1900)	...	(1901)

Table D.—Percentage of deaths under one month in different groups of diseases, of total deaths under one year.

				Lowest Year.	Highest Year.
I. Common infectious Diseases in the					
ten years	6·8—ranging from 2·4 to 14·3	...	(1899)	...	(1902)
II. Diarrhœal Diseases in the ten years	21·9— „ 10·4 „ 29·0	...	(1907)	...	(1904)
III. Wasting „ „	36·7 „ 32·8 „ 46·2	...	(1901)	...	(1903)
IV. Tuberculous „ „	3·1 „ 1·0 „ 4·7	...	(1907)	...	(1899)
V. Other Causes „ „	30·4 „ 19·6 „ 37·5	...	(1906)	...	(1905)

Table E.—Percentage of deaths under one week, of all deaths under one month.

						Lowest Year.	Highest Year.
In the ten years	...	...	...	60.5—ranging from 48.1 to 70.7	...	(1901)	... (1903)

Table F.—Percentage of deaths under one month in different groups of diseases, of deaths from all causes under one month.

						Lowest Year.	Highest Year.
I. Common Infectious Diseases							
	in the ten years	0.7—ranging from 0.7 to 3.7	...	(1908)	...	(1902)	
II. Diarrhœal Diseases	„	3.5	„	1.9 to 7.7	...	(1902)	... (1901)
III. Wasting	„	73.4	„	56.4 to 90.0	...	(1907)	... (1900)
IV. Tuberculous	„	0.47	„	0.47 to 2.8	...	(1908)	.. (1904)
V. Other	„	20.9	„	7.5 to 32.3	...	(1900)	... (1905)

On examining Tables V. and VI. for a series of years, we notice how rarely the common infectious diseases affect young infants during the first month or two, *i.e.*, whilst they are nursed and not moved about much; also that diarrhœal diseases cause few deaths during the first month, *i.e.*, until the effects of artificial feeding exert their influence. They also show that in certain years epidemic infantile diarrhœa hardly occurs, and is therefore a preventable disease within certain limits, although those climatic influences, which so largely affect the multiplication of injurious Bacterial germs, are beyond our control, still by general hygienic precautions and attention to the purity of the milk supply and the vessels in which it is kept, summer diarrhœa may be largely controlled and many lives may be saved.

Under Wasting Diseases are grouped two different causes of death, the first is connected with conditions of Birth, whilst the second and most important is dependent on feeding and sanitary surroundings. Under this heading the mortality is very great from 50 to 90 per cent. of all deaths under one month being ascribed to these Wasting Diseases.

Tuberculous Disease, as a cause of death during the first few months, is rare, and even during the first year the cases are very few. This points strongly to the fact that these diseases are acquired and mainly dependent on causes which do not exist in the new-born infant.

Tables A, B, C, D, E, and F, give some interesting percentages of the deaths during the first week and months of the first year of life.

Table A. shows that illegitimate children die at the rate of three to one during the first week of life.

Tables B. and C. point out the fatality of the first year of life, and we find that 19 per cent., or one-fifth of these deaths, are under the age of one week.

Table D. shows the percentages of death under one month of the several groups of diseases, whilst by Table E. we find that 60 per cent. die during the first week of life, and by Table F. that wasting diseases alone are responsible for over 70 per cent. of all deaths under one month.

From a first glance at these figures of infant mortality there seems little hope of materially diminishing the number of deaths, but this is not so, as in certain large centres the attempt has already been successfully made by the appointment of qualified Health Visitors, who by proper and skilled supervision of the varied conditions of infantile life and sickness have brought about a large diminution in the death rate.

In many large Towns and Boroughs women Visitors or Inspectors have been adopted, and the death rate among Infants has in many instances been very largely reduced, and there can be little doubt that the general adoption of this system of Health Visitors would materially lessen the death rate among infants, more especially as regards deaths attributed to Wasting diseases.

Education Act, 1907 (Section 13). Medical Examination of Children.

I was appointed Medical Examiner for the schools of the outlying parishes of the Rural District, but in consequence of objections, urged by some of the Councillors, I thought it best to resign the appointment in accordance with their wishes, but as this appointment is held by all neighbouring Medical Officers of Health I cannot see why I should have been singled out as an exception, more especially as in constantly visiting these out-of-the-way parishes, I have exceptional opportunities of visiting these schools in the ordinary routine of duty.

PART II. (A).

DEATHS FROM CONSTITUTIONAL CAUSES.

Phthisis.—Pulmonary Consumption causes 35 deaths, and other Tubercular diseases 18, altogether 53 deaths from Tubercular complaints.

The death rate from Phthisis is 0·84 per 1,000 population, and for all Tubercular diseases 1·27 per 1,000.

The Local Government Board have issued an order for the notification of all pauper cases of consumption. This notification will be strictly private and will doubtless prove the stepping stone for the more general notification of all consumptive cases. This is the first acknowledgment of the duty, incumbent on our governing powers, of dealing with this, the greatest and most fatal scourge from which we all suffer, and I trust it will be speedily followed by an order for all Councils to make such provision for the isolation of and dealing with the wants of consumptive patients at all stages of the disease, as their circumstances may render necessary.

Cancer.—Caused 25 deaths (12 males, 13 females), equal to 0·6 per 1,000, about the same as last year and below the average.

Diseases of Respiration.—These diseases, including Bronchitis, Pneumonia and Pleurisy, caused 49 deaths, equal to 1·16 per 1,000, which is much below the average.

Uncertified Deaths.—Six deaths were registered as uncertified.

There were 9 deaths in the district among non-resident strangers, viz., 4 in huts, 3 in caravans, and 2 in tents.

Inquests.—Coroner's Inquests were held in 34 cases, equal to 8·2 per cent. of all deaths and 0·8 per 1,000 population. Of these Inquests, 19 were returned as from natural causes; 8 were from accidents and of these 3 were from drowning, 1 from alcohol, and 2 were infants suffocated in bed; there were 5 suicides. Three of these inquests were in the Workhouse.

PART II. (B).

ZYMOTIC OR INFECTIOUS DISEASES.—NOTIFIABLE.

Small-pox, Scarlet Fever, Diphtheria, Enteric Fever, Erysipelas and Puerperal Fever have to be notified to the Medical Officer either by the Parent or Doctor.

During 1908, 245 cases of infectious disease were notified, of which 41 were Diphtheria, 134 Scarlet Fever, 45 Enteric Fever, 25 Erysipelas, and 1 Puerperal Fever; of these 164 were admitted to the Isolation Hospital; there were also 60 others belonging to the Public Institutions.

These various infectious diseases caused 79 deaths, against 39 in 1907, 90 in 1906, and 56 in 1905, and correspond to a death rate of 1·9 per 1000 population.

Measles caused 26 deaths, Scarlet Fever 4, Whooping Cough none, Diphtheria 6, Enteric Fever 5, Puerperal Fever 1, Erysipelas none, Diarrhœa 30, and Influenza 7.

The Zymotic Death Rate in England and Wales for 1908 was 0·99.

These 245 Notifications correspond with the average of the past six years, which when compared with the figures of the ten preceding years show a diminution of about one-half, and fully bear out the remarks I have already made as to the benefits resulting from the sanitary improvements effected since my appointment in 1899.

The cases of Scarlet Fever were much less numerous than in 1907, whilst Enteric Fever and Diarrhœa show an increase.

A recent outbreak of Diphtheria in Swanley Village accounts for the increase over the figures for 1907, otherwise the cases have been quite isolated, and many of them were quite trivial.

Of the 45 cases of Enteric, more than half occurred within a few weeks in a single street in Crayford. This epidemic was a remarkable instance of Enteric Fever being carried from house-to-house without being traceable to any common cause; the sanitary conditions are good, the street is sewered, the water supply from the Metropolitan Water Board pipes, no shell fish were eaten, but two or three cases were kept at home, owing to the Hospital being full.

(1). Scarlet Fever.—134 cases were notified, of which 101 were removed to Hospital. There were 4 deaths, giving a death rate of 0·09.

Scarlet Fever was much prevalent in London in 1907 and the first half of 1908, and our District suffered in the same way, the cases gradually becoming fewer towards Autumn. The cases were distributed over the whole district, but it never assumed an epidemic form. The chief outbreaks were in Stone and Ash during the early months, and in Darenth later in the year. The cases in Stone were a continuation of the outbreak of 1908.

(2). Diphtheria and Membranous Croup were responsible for 41 notifications, against 17 in 1907; 34 in 1906 and 74 in 1905; of these 28 were removed to the Isolation Hospital.

Of the 41 cases notified, 19 occurred within Swanley Village School area; 5 each in Crayford, Horton Kirby and Stone; 3 each in Swanscombe and Wilmington, and 1 in Darenth.

There were 6 deaths, giving a mortality of 14·8 per cent of all attacked, and a death rate of 0·014 per 1,000 population, that of England and Wales being 0·15.

The outbreak in Swanley Village was effectually stopped by closure of the school for several weeks, and was the subject of a special report to the Sutton Parish Council.

I have already referred to the remarkable figures, especially in the case of Diphtheria, obtained by tabulating the number of cases and deaths notified during the past 14 years; the diminution in these septic diseases thus shewn is very noticeable, and forms a strong contrast to the state of things existing ten years ago, when I was first appointed.

(3). Typhoid Fever.—45 cases were notified, and of these 35 were removed to Hospital. There were 5 deaths, giving a death rate of 0·12 per 1,000 population. Four of these deaths belong to the epidemic before referred to, in Arthur Street, Crayford. The other cases were scattered through the various parishes, and two were from the Public Institutions.

(4). **Erysipelas.**—25 cases were notified in the district, but no deaths were reported.

(5). **Puerperal Fever.**—One case occurred, due to Scarlet Fever infection, which terminated fatally.

PART II. (C).

Zymotic or Infectious Diseases.—(Not notifiable).

(1). **Measles.**—Not being notifiable I have no means of knowing how many cases may have occurred, and can only make a guess when asked to close a school on account of Measles being epidemic. 26 deaths were reported. The outbreak commenced in the North End School, Crayford. Then it appeared in Wilmington, spreading thence each way, and necessitating school closure in each parish, except Ash, Hartley, Longfield and Southfleet.

(2). **Whooping Cough.**—Caused no death, in fact there was little or no Whooping Cough within the district.

(2). **Diarrhoea** was more prevalent than in 1907, and caused 30 deaths, but it was by no means general; the semi-urban parishes of Swanscombe and Crayford, where we generally have a large number of cases, only recording 2 and 3 deaths respectively, whilst most of the cases occurred in the Crockenhill and Sutton districts.

(4). **Influenza.**—Influenza evidently appears to be somewhat abating, although occasionally it assumes a serious form. 7 deaths were reported in the parishes of Stone, Swanscombe and Crayford.

The Annual Reports of the Sanitary Inspectors, as well as the special Forms of Report, as supplied by the Local Government Board, are appended.

I have the honour to be,

Yours faithfully,

Sylvester Richmond

Medical Officer of Health.

REPORT of the Chief Inspector on the Sanitary Work for the Year 1908.

Your Inspectors have made constant inspections with regard to overcrowding and nuisances, and when time has allowed, house-to-house inspections.

There have been ten Board Orders served, and one summons was granted for exposing diseased meat for sale, and a conviction was obtained.

Circular Notices were served on all butchers with regard to the "humane slaughtering of animals."

All dairies, cowsheds, milkshops, slaughterhouses, and bakehouses, are constantly inspected.

Crayford.—The Black Huts, also three cottages, Bexley Lane, have been demolished, and Howberry Farm Cottages have been re-drained.

A three stall stable Store and Cart Shed have been erected on the Council's premises at Slades Green.

Stone and Swanscombe.—The work of cesspool emptying is being carried on by the Councils and is giving satisfaction with regard to efficiency and cost.

The chief difficulty in Swanscombe has been to obtain suitable tips for the sewage.

Horton Kirby.—A new sewer has been constructed to connect the Home for Little Boys to the main sewer.

Connections to Sewer : Crayford.—House and cottage, Sawmills ; "The Horse and Groom" and two cottages ; and Belmont Villas.

Plans passed for New Buildings.

Two new urinals for public-houses.

65 houses ; 12 additions, and 2 corrugated iron Schools.

New block Bow Arrow Hospital ; Fire Station, Galley Hill ; New block, Home for Little Boys, Hextable, and new system of drainage for Little Boys' Home, Horton Kirby.

Completion of building of Wall Paper Works, Greenhithe.

24 houses are connected to a sewer of their own, which conveys sewage to a septic tank with slate beds, some 200 yards from the houses, the effluent being disposed of by land drains.

J. E. GOREHAM,

Chief Inspector.

INSPECTORS' REPORTS.

For the Year ending 31st December, 1908.

	District No. 1.	District No. 2.	District No. 3.	District No. 4.
	Mr. Longhurst.	Mr. Miles.	Mr. Caffyn.	Mr. Tiley.
1 Complaints received and investigated, and nuisances abated - - - - -	31	124	143	31
2 Inspections made - - - - -	Constant.	Constant.	Constant.	Constant.
3 Dwelling Houses closed - - - - -	—	17	—	1
4 Plans passed for new houses - - - - -	—	—	21	9
5 Plans passed for new additions - - - - -	—	—	5	10
6 Defective roofs repaired - - - - -	27	23	9	17
7 Yards paved, repaired and drained - - - - -	3	13	3	2
8 Animals improperly kept—Removed - - - - -	5	—	4	5
9 Defective drains repaired - - - - -	43	34	95	92
10 Fruit-pickers' huts whitewashed - - - - -	75	150	12	359
11 Water laid on and wells abolished - - - - -	14	—	1	1
12 Old wells abolished - - - - -	8	—	—	—
13 Samples of water analysed - - - - -	—	1	—	—
14 New ash pits or dust tins provided - - - - -	—	140	6	27
15 Overcrowding abated - - - - -	—	7	2	2
16 Cesspools abolished and houses connected with sewer - - - - -	—	9	—	5
17 Cesspools repaired - - - - -	19	—	10	5
18 New Cesspools provided - - - - -	29	—	7	3
19 Privy pits abolished - - - - -	9	5	10	4
20 Privies emptied - - - - -	nt obtainable	93	145	198
21 Cesspools emptied - - - - -	551	832	2240	2561
22 Loads of sewage removed - - - - -	nt obtainable	3207	7331	12112
23 Loads of ashes and refuse removed - - - - -	nt obtainable	{ Crayford 1516	2110	—
24 Infectious cases removed to Hospital - - - - -	35	67	42	43
25 Houses disinfected after infectious disease - - - - -	39	75	54	46
26 Schools disinfected after infectious disease - - - - -	4	9	—	1
27 Sanitary defects in schools repaired - - - - -	3	7	4	2
28 No. of Cowsheds, Milksealers, etc., registered - - - - -	10	6	14	12
29 No. of Bakehouses registered - - - - -	4	7	15	17
30 No. of Slaughter-houses in use - - - - -	4	2	5	9

TABLE I.

Vital Statistics of Whole District during 1908 and previous years.

YEAR.	Population estimated to middle of each year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITU- TIONS IN THE DISTRICT.	Deaths of Non- residents registered in Public Institu- tions in the District.	Deaths of Residents registered in Public Institu- tions beyond the District.	Net Deaths at all Ages belonging to the District.	
		Number.	Rate.	Under 1 Year of Age.		At all Ages.					Number.	Rate.
				Number.	Rate per 1,000 Births registered.	Number.	Rate.					
I	2	3	4	5	6	7	8	9	10	11	12	13
1898	37250	1016	27.2	173	170	625	16.7	178	118	56	563	15.1
1899	37897	1085	28.6	169	155	582	15.3	185	112	73	543	14.3
1900	38544	1091	28.3	146	130	532	13.8	199	111	88	509	13.2
1901	39193	1096	27.9	191	173	641	16.3	213	141	72	572	14.5
1902	38080	1115	29.2	132	118	692	18.1	349	247	81	523	13.7
1903	38739	1058	27.2	107	101	473	12.1	188	131	57	399	10.2
1904	39305	1021	25.9	128	125	527	13.4	185	128	56	455	11.5
1905	39881	980	24.5	96	97	498	12.4	224	159	65	404	10.1
1906	40371	963	23.8	133	138	541	13.3	184	125	59	475	11.7
1907	40984	1000	24.4	96	96	437	10.6	162	106	56	387	9.4
Averages for years 1898-1907.	39024	1042	26.6	137	130	554	14.1	206	137	66	483	12.3
1908	41523	954	22.9	93	97.5	448	10.7	93	93	58	413	9.9

Area of District in Acres
(exclusive of area covered by water). } 38891

Total population at all ages ... 39193
Number of inhabited houses ... 6937
Average number of person per house 5.4 } At Census 1901.

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions, the deaths in which have been distributed among the several localities in the District.
1. City of London Mental Hospital, Stone. 2. Metropolitan Asylum, Darenth 3. Gore Farm Hospital, (Scarlet Fever), Darenth. 4. S. Bartholomew's Hospital, Kettlewell Homes, Swanley Junction. 5. White Oak Schools Eye Hospital, Swanley Junction. 6. Parkwood Hospital Convalescent Home, Horton Kirby, Swanley Junction.	1. Workhouse Infirmary, Dartford. 2. Bow Arrow Isolation Hospital, Dartford. 3. Livingstone Cottage Hospital, Dartford. 4. Small-pox Hospital, Joyce Green, Dartford.	Nil.

TABLE II.

Vital Statistics of separate Localities in 1908 and Previous Years.

NAMES OF LOCALI- TIES.	Whole District.				Ash.				Crayford.				Darenth.				Eynsford.				Farningham.			
	Population esti- mated to middle of next year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1898	37250	1016	563	176	610	17	17	3	6180	187	103	32	3284	23	18	—	1955	46	26	6	1144	35	18	5
1899	37897	1085	543	169	610	20	11	3	6310	219	109	33	3354	22	16	6	1971	65	29	11	1239	26	10	4
1900	38544	1091	509	146	608	15	7	1	6440	253	96	27	3428	33	13	2	1986	63	41	6	1284	29	11	1
1901	39193	1096	572	191	608	15	6	2	6572	190	118	35	3493	23	14	4	2004	63	27	8	1328	36	23	7
1902	38080	1048	523	132	617	15	6	1	6679	209	102	24	3506	34	21	3	2009	44	39	9	1345	32	15	1
1903	38739	1058	399	107	622	13	8	2	6810	197	75	19	3512	16	10	2	2040	64	33	9	1358	25	12	2
1904	39395	1021	455	128	632	15	5	1	6930	212	83	23	3536	35	11	1	2072	59	27	8	1379	40	19	6
1905	39881	980	404	96	644	25	13	6	7047	195	84	6	3551	28	13	4	2095	49	26	6	1394	31	16	3
1906	40371	965	475	133	653	15	6	1	7153	192	86	24	3563	26	14	5	2113	46	28	6	1397	28	25	6
1907	40984	1000	387	96	665	18	6	2	7302	209	60	21	3580	28	11	1	2136	47	24	6	1406	31	22	2
Averages of years 1898-1907.	39055	1036	483	138	627	17	7	2	6741	206	88	24	3481	27	15	3	2038	54	30	7	1327	31	17	4
1908	41525	954	413	93	697	11	9	3	7422	200	80	14	3600	29	9	2	2155	47	28	10	1413	23	16	5

TABLE II.

Vital Statistics of separate Localities in 1908 and Previous Years.

NAMES OF LOCALITIES.	Fawkham				Hartley.				Horton				Kingsdown.				Longfield.				Lullingstone.			
	Population estimated to middle of next year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population estimated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1898	265	8	3	—	282	8	3	—	1782	40	21	10	480	13	2	—	582	14	11	3	87	3	—	—
1899	268	4	4	2	283	6	7	1	1815	40	14	2	488	17	4	1	594	26	8	3	91	3	—	—
1900	272	4	1	—	283	17	7	1	1848	24	15	2	497	15	10	1	606	18	11	4	94	3	1	—
1901	276	5	2	1	284	12	8	5	1884	40	22	2	507	8	5	2	617	28	16	7	97	4	1	—
1902	282	8	2	—	287	6	3	1	1894	34	24	3	518	13	1	1	631	25	11	1	99	2	—	—
1903	290	9	1	1	289	7	5	1	1923	45	16	3	531	17	4	—	649	33	15	5	102	5	2	1
1904	293	5	2	—	296	10	3	1	1945	47	25	10	536	12	7	2	663	24	8	5	106	4	—	—
1905	296	5	2	—	303	8	1	—	1963	44	26	5	540	10	6	3	680	29	14	6	108	2	—	—
1906	303	10	3	—	305	8	6	1	1973	34	24	4	551	12	1	—	695	26	11	7	109	3	2	2
1907	304	5	1	1	307	6	4	—	2007	51	17	5	554	9	6	—	708	22	9	1	112	4	1	—
Averages of years 1898-1907.	285	6	2	—	292	9	5	1	1903	40	20	5	520	12	5	1	642	24	11	4	100	4	1	—
1908	305	5	4	1	313	8	2	1	2019	39	27	5	556	9	7	1	719	20	9	2	114	2	—	—

TABLE II.

Vital Statistics of separate Localities in 1908 and Previous Years.

NAMES OF LOCALI- TIES.	Ridley.				Southfleet.				Stone				Sutton				Swanscombe.				Wilmington			
	Population esti- mated to middle of next year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1898	68	3	1	—	1067	29	13	3	4726	146	50	19	4409	134	76	15	6857	211	141	57	1869	57	34	14
1899	64	2	2	1	1082	33	12	4	4861	163	80	26	4489	131	69	24	6897	214	74	26	1890	55	38	12
1900	62	4	—	—	1096	32	12	2	4996	157	80	30	4569	117	74	31	6936	217	77	27	1911	56	50	10
1901	64	2	—	—	1111	25	16	6	5131	166	69	18	4650	165	75	25	6975	206	106	37	1932	61	38	18
1902	64	3	3	—	1128	27	10	2	5242	183	73	20	4719	137	68	23	7090	204	89	23	1971	72	33	10
1903	66	2	—	—	1135	23	16	3	5378	174	37	14	4804	135	50	9	7222	224	92	26	2017	69	23	10
1904	66	2	2	—	1154	29	10	4	5487	160	51	21	4870	141	75	22	7301	174	95	20	2037	52	30	9
1905	69	3	—	—	1160	20	14	—	5586	156	57	21	4963	136	43	13	7407	181	75	16	2075	58	20	1
1906	69	1	1	—	1160	18	18	6	5692	165	59	22	5029	135	74	20	7495	178	90	24	2114	66	27	5
1907	69	—	—	—	1183	34	11	3	5793	150	49	13	5104	140	65	12	7620	198	73	23	2137	48	25	6
Averages of years 1898-1907.	66	2	1	—	1127	27	13	3	5289	162	60	20	4760	137	67	19	7180	201	91	28	1995	59	30	9
1908	69	3	3	—	1205	33	9	4	2899	150	44	15	5178	132	58	9	7723	184	81	14	2169	59	27	7

TABLE IV.

Causes of, and Ages at, Death during Year 1908.

Causes of Death.	Deaths in or belonging to the whole District at subjoined ages.							Deaths in or belonging to (Localities at all ages)														Total Deaths in Public Institutions in the District						
	All Ages	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	Ash	Crayford	Darent	Eynsford	Farningham	Pawkhams	Hartley	Horton Kirby	Kingsdown	Longfield	Lullingstone	Ridley	Southfleet	Stone		Sutton-at-Hone	Swanscombe	Wilmington	City Asylum	Darent Asylum	Gore Farm
Small-pox
Measles
Scarlet Fever
Whooping-cough
Diphtheria (including Membranous Croup)
Croup
Fever (Enteric)
Epidemic Influenza
Cholera
Plague
Diarrhoea
Enteritis
Puerperal Fever
Erysipelas
Phthisis (Pulmonary Tuberculosis)
Other tuberculous diseases
Cancer, malignant disease
Bronchitis
Pneumonia
Pleurisy
Other diseases of Respiratory organs
Alcoholism
Cirrhosis of liver
Venereal diseases
Premature birth
Diseases and accidents of parturition
Heart diseases
Accidents...
Suicides
All other causes
All causes

All causes

93

TABLE V.
Dartford Rural District.
INFANTILE MORTALITY DURING THE YEAR 1908.

Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.				Under 1 week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	...	...	19	5	3	5	32	12	10	5	2	5	4	2	3	5	5	4	89
	Uncertified	...	...	1	..	..	..	1	1	..	..	1	..	1	..	..	..	..	..	4
i. Common infectious Diseases.	Small-pox	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1
	Measles	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	3
	Scarlet Fever	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria (including Membranous Croup	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ii. Diarrhoeal Diseases.	Diarrhoea, all forms	...	...	..	..	..	2	2	3	1	1	1	2	2	..	..	1	1	..	14
	Enteritis, Muco-enteritis	...	...	..	..	..	..	..	..	3	..	..	..	1	..	..	1	..	..	5
	Gastro-enteritis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gastritis, Gastro-intestinal Catarrh	...	...	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	1
iii. Wasting Diseases.	Premature Birth	...	...	10	1	1	1	13	..	..	..	..	..	..	..	..	..	..	..	13
	Congenital Defects	...	...	6	2	1	1	10	..	..	..	..	..	..	..	..	..	..	..	10
	Injury at Birth	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast-milk, Starvation	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus	...	...	3	1	1	..	5	6	2	..	..	1	1	..	..	..	..	..	15
	
iv. Tuberculous Diseases.	Tuberculous Meningitis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tuberculous Peritonitis : Tabes Mesenterica	...	...	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
	Other Tuberculous Diseases	...	...	..	..	..	..	..	..	..	1	1	..	..	..	1	..	..	..	3
	
v. Other Causes	Erysipelas	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Rickets	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis (<i>not Tuberculous</i>)	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	...	...	1	..	..	..	1	2	..	..	..	..	1	1	..	1	..	..	6
	Bronchitis	...	...	..	..	..	..	..	1	3	3	1	1	..	1	..	..	1	3	14
	Laryngitis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	...	...	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	2
	Suffocation, overlying	...	...	..	1	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2
	Other Causes	...	...	..	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	3
				20	5	3	5	33	13	10	5	3	5	5	2	3	5	5	4	93

District (or sub-division) of Dartford Rural. Population estimated to middle of 1908, 41,525.

Births in the year { legitimate 925.
illegitimate 29

Deaths in the year of { legitimate infants 82.
illegitimate infants 11.

Deaths from **all Causes at all Ages** 413.

TABLE VI.
Dartford Rural District.
INFANTILE MORTALITY DURING THE 10 YEARS 1899-1908.
Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.				Under 1 week	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	...	...	237	70	53	41	401	124	135	85	80	64	60	70	76	57	54	52	1258
	Uncertified	...	...	18	2	...	...	20	2	2	1	2	2	2	4	2	1	1	1	40
i. Common infectious Diseases.	Small-pox	...	...	...	1	1	...	2	...	2	...	2	1	1	1	1	...	...	1	11
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
	Measles	...	...	...	...	...	...	...	...	1	1	1	2	...	2	3	2	5	4	21
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2
	Diphtheria (including Membranous Croup	...	...	...	...	1	...	1	...	...	1	...	...	...	1	...	2	1	...	6
	Whooping Cough	...	...	...	...	...	...	...	3	6	4	2	2	6	6	7	4	2	5	47
ii. Diarrhoeal Diseases.	Diarrhoea, all forms	...	...	...	2	1	4	7	14	19	26	22	20	16	19	20	14	18	11	206
	Enteritis, Muco-enteritis	...	...	...	1	1	2	5	3	9	10	8	3	6	4	3	5	1	2	59
	Gastro-enteritis	...	...	...	...	...	3	3	...	2	...	3	2	2	3	4	...	...	1	20
iii. Wasting Diseases.	Gastritis, Gastro-intestinal Catarrh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Premature Birth	...	...	...	150	18	20	10	198	14	4	1	...	...	...	...	...	...	...	217
	Congenital Defects	...	...	...	26	5	2	4	37	3	7	1	2	...	...	1	...	1	...	52
	Injury at Birth	...	...	...	9	...	...	9	...	1	...	...	...	...	...	...	...	...	...	10
	Want of Breast-milk, Starvation	...	...	...	1	1	1	1	4	3	3	2	2	1	1	2	1	...	...	19
	Atrophy, Debility, Marasmus	...	...	...	33	17	6	5	61	42	30	9	9	12	6	3	7	5	4	191
iv. Tuberculous Diseases.	Tuberculous Meningitis	...	...	...	...	...	1	1	1	1	2	1	5	2	1	4	3	1	2	24
	Tuberculous Peritonitis: Tabes Mesenterica	...	...	...	...	...	...	...	...	...	1	...	1	...	1	1	...	2	1	7
	Other Tuberculous Diseases	...	...	...	...	...	1	1	...	...	1	2	...	1	...	2	1	1	1	10
v. Other Causes	Erysipelas	...	...	...	...	1	...	1	1	...	...	...	...	1	...	...	...	...	...	3
	Syphilis	...	...	...	...	2	...	1	3	1	5	...	2	...	1	...	2	...	...	14
	Rickets	...	...	...	...	...	...	...	...	...	2	1	1	...	1	...	...	...	...	5
	Meningitis (not Tuberculous)	...	...	...	...	...	...	...	...	...	1	3	...	1	...	...	1	1	...	7
	Convulsions	...	...	...	22	13	7	3	45	4	9	1	5	3	4	8	6	8	3	101
	Bronchitis	...	...	...	2	5	4	2	13	21	22	19	14	10	11	15	9	7	13	161
	Laryngitis	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	2
	Pneumonia	...	...	...	...	...	3	1	4	6	6	2	1	1	...	6	7	1	4	36
	Suffocation, overlying	...	...	...	4	4	2	...	10	7	5	1	1	...	1	...	...	...	...	25
	Other Causes	...	...	...	7	3	3	2	15	2	5	1	1	2	2	3	1	2	5	41
				255	72	53	41	421	126	137	86	82	66	62	74	78	58	55	53	1298

District (or sub-division) of Dartford Rural. Population estimated to middle of 1908, 41,525.

Births in the year { legitimate 10070.
illegitimate 291

Deaths in the year of { legitimate infants 1188.
illegitimate infants 110.

Deaths from all Causes at all Ages 4678.